NETWORK EXPANSION PROJECT

STAKEHOLDER COMMITTEE MEETING
Room 172, Capitol Building
June 13, 2008

<u>AGENDA</u>

Attendees: Karen Nelson-Judiciary, Sandy Broesder-MaCO, Mark Bruno-OBPP, Tom O'Sullivan (for Mike Bousliman)-Transportation, James Thomas (for Bill Griffenberg)-Justice, Jerry Marks-DPHHS, Steve Holman-Revenue, Wes Old Coyote, Amy Palmer, Steve Noland, Julia Lester, Carl Hotvedt, Steve Bender

Introductions - Wesley Old Coyote
Everyone introduced themselves. Wes explained the ITSD reorganization currently underway to align the Enterprise operations with the services that are provided and the functions that are supported across the Enterprise. Our current direction with the network and the expansion ties into the 2010 Initiative in saving energy and power. Cost of fuel has a direct impact on IT in the network world with increased requests for video and unified communications implementation and utilization. How we are going to support that transition into the future to facilitate 2010 and ease the strain on travel and other requirements is now being addressed.

Overview of Current Activity - Carl Hotvedt

-Fiber Upgrades - The Capitol fiber upgrade will be done by the end of the month. It will support higher speeds and longer distances needed on the capital complex. Work is wrapping up on interconnecting the old Stark Armory to the downtown business area by the new Federal Reserve Bank and P&G.

-Network Management Tools - Most are installed and operational. Rob Shipley will be doing a demonstration next week for ITSD staff on the capabilities of those tools. The intent will be to do a public demonstration of those tools and what pieces can be used to view network utilization and what additional capabilities will be out there.

-Internet Portal Upgrades – We are waiting on backbone pieces to finish that. Failover processes have been tested.

-Non-State DMZ - Equipment has been ordered. Changes and upgrades will begin in the June maintenance timeframe and then again in July. New boxes will be installed and things moved to Billings. The intent is to have everything in place so when we cut over remote sites, the non-state DMZ can be done at the same time.

Network Services - Julie Lester
Julia talked about three areas of the services that will be deployed on the new network: WAN optimization, Traffic Shaping, VPN Services.

WAN optimization is new and is comprised of two pieces: WAN Acceleration and WAFS (Wide Area File Services). *WAN Acceleration* takes existing bandwidth and through compressing or caching or prioritizing it will, in effect, improve the user experience by getting a faster response with less bandwidth. *WAFS* is the actual caching of that data. This saves WAN bandwidth and time. ITSD is in the process of releasing an RFP for WAN optimization and should have something in service by the end of the year.

Traffic shaping will allow us to prioritize the data going back and forth. Today, our network primarily transports data. Moving forward with the new system, video will be added. In prioritizing the data, when there are video streams (interactive or streaming), the priority will be moved up and it will have the bandwidth and latency that it needs. Traffic shaping is accomplished by limiting the amount of data that any one application is allowed to consume on the WAN and by lowering the priority of non-business data (i.e., downloading of content from the Internet). Traffic shaping is prioritized based on who you are, not where you are going.

Someone asked, "How are you determining the priority of applications?" Julia explained that the bandwidth that heads to the Internet, based on DMZ address, will be given first priority. Everything else has a lower priority, both incoming and outgoing. A server that sits on the DMZ address will always have a high priority. Business critical applications and email have high priority.

Another question was, "Will there be a way to define Internet-based sites outside of state government that are business critical?" Wes Old Coyote explained that the Service Continuity Bureau has been working on establishing, with the respective agencies, critical applications and critical sites that need to be accessed. Sharing that information with ITSD will help facilitate what is needed. The initial phase was to limit activity of video streaming sites and radio sites. Later on there will be areas, that agencies designate, that will be blocked.

VPN Services - A VPN system will allow a remote person to connect into the SummitNet state network through a secure channel and that channel would be encrypted. Who will monitor this and handle it, is yet to be determined. Julia went on to point out some VPN features: Role based contexts-employee and contractor; authentication for a password tied to the Enterprise Active Directory; and two-tier authentication. Someone asked, "Will the billing structure change with the new VPN?" Steve Noland explained that through FMM, we will come up with a rate that's similar, but with a much broader Enterprise solution.

Remote Site Upgrades - Steve Noland
Steve gave an overview of where we're at today in the deployment of the network expansion.

Bresnan Backbone – The Bresnan network, as proposed for the new State of Montana network, is comprised of four core multiple aggregation sites. The core network will have a 2.5Gb primary path, with a backup or redundant 1Gb path. All sites will have the capability of a primary and a backup configuration. Core and aggregation sites are shared by both state and university systems. The core itself has been ordered and expectation of handing over that capability is mid-August.

Bresnan Regional Aggregation Sites – The aggregation network is comprised of 13 aggregation points throughout the state. There will be flexibility to expand as required and as we can get funding to do it. Aggregation sites have been ordered, but do not have scheduled install dates.

Handouts included a list of preliminary proposed sites that will be converged sites – the first sites to take advantage of the Bresnan network to do voice, video, data, and to prioritize traffic. The next step is a review of the remaining sites and what can be done to take advantage of common management tools available through this proposal, which sites can fiscally be moved forward, and negotiations of requirements from the agencies to move as many as possible to this new network.

Someone asked, "Would Bresnan be able to provide service to the general public?" Steve Noland and Carl Hotvedt explained that in communities where Bresnan does not have a market, they do not have plans to expand into those sites. In markets where they are currently active, they would have the ability to expand. The State of Montana's traffic will be isolated, secured, and prioritized over Bresnan's general business traffic.

Review Converged Site List – This list was based upon a gathering of information where there were SLA's for video and multiple agencies using SummitNet for some purpose. Some sites out there have video, but no SLA in place. Sites will be upgraded as needs, revenue, and SLA's dictate. The next phase will be looking at non-video sites and placing those orders, dependent upon the budget.

Another question was, "In urban counties where SummitNet and the county network are entwined, will you be working with the counties to redesign networks?" Steve Noland explained that today we have a rate model for non-state entities and bandwidth can be expanded to any location, but there is a cost involved and we will work with the counties on the pricing structure. It will take work between the counties and the state to determine typical hardware requirements, etc. As long as standards are met and protocol is followed, things should work. The counties that are connected to SummitNet will have immediate benefits as traffic shaping is worked through. Sandy Broesder asked if there was a recommended list of equipment and protocols, stating that small and mid-sized counties have neither the resources nor the capabilities to meet the needs of the users and are looking at doing some sort of consortium. If they had a list to start with, it would help them in enabling those things.

Project Cost Impacts - Carl Hotvedt
Carl updated everyone on the current status of the projected costs for the network. He laid out what the incremental increase in costs will be to facilitate the level of bandwidth and connectivity being discussed. He reviewed the projected costs for capitol fiber, network management tools, Internet redundancy, non-state DMZ and remote site upgrades. Carl also reviewed the projected cost summary report.

Options to consider are: reducing bandwidth requirements based upon WAFS implementation and bandwidth upgrades, a prepayment option of $2 million and getting a 6.5 percent discount on communications expenses, and extending project funding – if we take the balance of the funding after the initial one-time costs in FY 08-09 and apply it to the balance, we can extend it for a couple of years so we can look at incremental rate increases and allow us to grow into it rather than jump into it. Satellite services in remote locations are being looked at. Equipment projections are close to what was budgeted. Ongoing communications costs are higher than expected. Agencies are asked to share what their plans are. By providing that information, we can collaborate and share infrastructure and costs.

It was explained that we are looking at ways to be more cost effective in the systems we deploy and share those costs across all platforms. This is a new paradigm. How can we take advantage of those unified communication opportunities? We need to maintain continuity of both worlds.

A final question was, "When will we work on implementation issues and tactical details?" Carl Hotvedt stated that as soon as we get dates from Bresnan on getting their core and backbone and aggregation site upgrades in place. Julia has a project plan laid out and within the next couple of weeks, we should see dates from Bresnan and will start working with agencies.

If there are questions about capabilities and options within the new network, don't hesitate to give a call.

Next Meeting - Wesley Old Coyote
To be announced.

Meeting adjourned at 11:45 a.m.